Taxonomic study of the subgenus *Haptoncus* (Coleoptera: Nitidulidae: Epuraeinae: *Epuraea*) with one newly recorded species from China

Mengjiao ZHAO[1], Xingke YANG[2], Min HUANG[1]①

1. *Key Laboratory of Plant Protection Resources and Pest Management of Ministry of Education, Entomological Museum, Northwest A&F University, Yangling, Shaanxi 712100, China*

2. *Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China*

Abstract: We examined the subgenus *Haptoncus* of *Epuraea* in China, including a total of 5 species with 1 newly recorded species: *Epuraea* (*Haptoncus*) *picinus* Gillogly, 1982. A simple description of this newly recorded species and a key to the Chinese species of the subgenus *Haptoncus* Murray is given. Photos of the habitus and the pictures of the genitalia of *Haptoncus* from China are also provided.

Key words: Polyphaga; Cucujoidea; taxonomy; key; sap beetles

中国凹唇露尾甲亚属分类研究及一新纪录种（鞘翅目：露尾甲科：长鞘露尾甲亚科：长鞘露尾甲属）

赵萌娇[1]，杨星科[2]，黄敏[1]①

1. 植保资源与病虫害治理教育部重点实验室，西北农林科技大学昆虫博物馆，陕西 杨凌 712100; 2. 中国科学院动物进化与系统学重点实验室，中国科学院动物研究所，北京 100101

摘要：对中国凹唇露尾甲亚属进行分类研究，共发现 5 种，包括 1 个中国新纪录种：暗褐露尾甲 *Epuraea* (*Haptoncus*) *picinus* Gillogly, 1982。简述了该新纪录种的形态特征，提供了中国凹唇露尾甲亚属已知种的检索表。给出了中国现有种形态特征图并绘制外生殖器图。

关键词：多食亚目；扁甲总科；分类；检索表；露尾甲

Introduction

Murray (1864) first published *Haptoncus* as a new genus of Nitidulidae with description of some new species. Subsequently, Grouvelle (1897, 1906, 1908, 1913, 1914), Gillogly (1947, 1962, 1982), Hisamatsu (1959), Kirejtshuk (1989, 1998) and Audisio & Nardi (2007) described a large number of new species. Kirejtshuk (1986) transferred *Haptoncus* Murray into the Epuraeini Kirejtshuk, placing them in *Epuraea* Erichson.

Insects of *Haptoncus* have been reported as storage pests, cotton pests and pollinators (Luo *et al*. 2004). Many species of this subgenus are rather common representatives of tropical and subtropical fauna and are connected with lowland forests of different types and cultural plantations, often showing imaginal activity nearly the year round (Kirejtshuk 1998). There are

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①Corresponding author, E-mail: huangmin@nwsuaf.edu.cn

61 known species worldwide, of which 6 are from China (Taiwan). Here 5 species are studied from the mainland, including one newly recorded species. We provide photos of 5 species with pictures of genitalia.

Material and methods

All species examined are deposited in the Entomological Museum of Northwest A&F University, Yangling, Shaanxi, China (NWAFU).

All descriptions and measurements were made under an Olympus SZX 10 microscope. Figures were made using Leica ZOOM 2000 microscope with an O-image CCD. Images were produced using the software Synoptic Automontage.

Taxonomy

Epuraea (*Haptoncus*) Murray, 1864

Haptoncus Murray, 1864: 401; Type species: *Haptoncus tetragonus* Murray, 1864 (= *Epuraea ocularis* Fairmaire, 1849); Kirejtshuk, 1986: 27.

Haptoncurina Jelinek, 1977: 376; Type species: *Epuraea angustula* Motschulsky, 1863.

Epuraea (*Haptoncurina*) Jelinek, 1977; Kirejtshuk, 2008: 113.

Haptoncura Reitter, 1875: 61; Type species: *Epuraea luteola* Erichson, 1843.

Epuraea (*Haptoncura*) Reitter, 1875: 61; Kirejtshuk, 2008: 113.

Diagnosis. Body small, length 1–2.5 mm; oval or oblong; flattened or slightly convex. Pale yellow brown to dark brown. Surface smooth or reticulate, with short and moderately distinct yellow pubescence. Large eyes composed of rather large facets; last maxillary palpomere distinctly transverse, widening to apex. Usually lacking secondary sexual structure in mouth parts, legs and elytra. Weakly sclerotized and uniform configurations of sclerites in genitalia of both sexes.

Distribution. China (Hebei, Fujian, Jiangxi, Shandong, Henan, Hubei, Hunan, Guangxi, Sichuan, Guizhou, Yunnan, Shaanxi, Gansu); Europe; North Africa; Asia.

Key to species of *Epuraea* (*Haptoncus*) from China

1. Body wide oval, temple present behind eye ········ 2
-. Body oblong, temple absent behind eye ········ 3
2. Pronotum and elytra unicoloured brown, without dark spots ········ *E.* (*H.*) *luteolus* Erichson
-. Pronotum and elytra with irregular dark spots ········ *E.* (*H.*) *ocularis* Fairmaire
3. Pronotum with discal sculpture reticulate ········ 4
-. Pronotum with discal sculpture alutaceous or smooth ········ 5
4. Dorsum with distinct and sparse punctures ········ *E.* (*H.*) *picinus* Grouvelle n. rec.
-. Dorsum with moderately distinct and dense punctures ········ *E.* (*H.*) *fallax* (Grouvelle)
5. Pronotum with discal sculpture alutaceous ········ *E.* (*H.*) *motschulskyi* (Reitter)
-. Pronotum with discal sculpture smooth ········ 6
6. Body oblong, convex; pronotum and elytra with narrow margins ········ *E.* (*H.*) *paulula* Reitter
-. Body more subquadrangular, smaller, flattened; pronotum and elytra with wide margins ········ *E.* (*H.*) *concolor* Murray

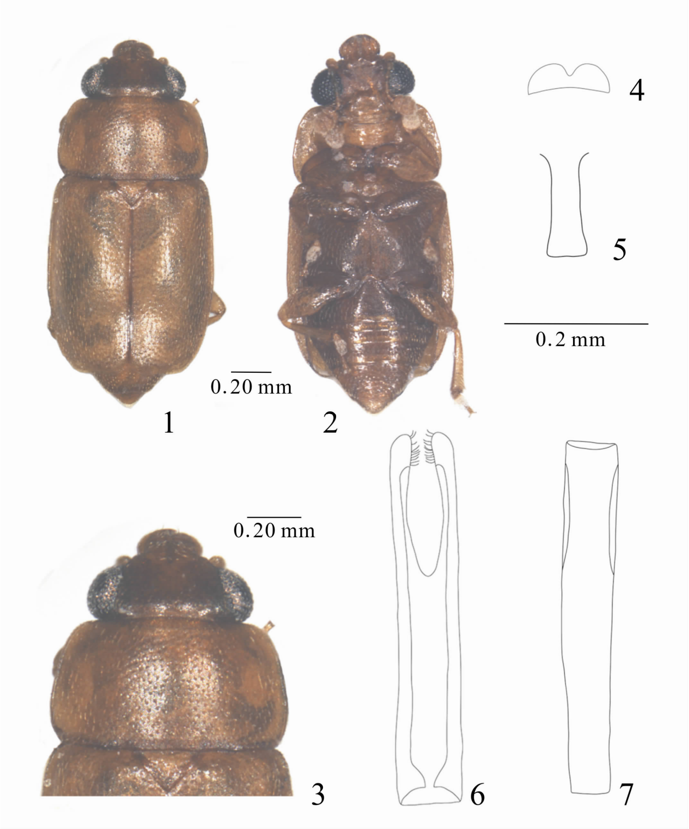
1. ***Epuraea* (*Haptoncus*) *picinus* Grouvelle, 1906** (Figs. 1–7), new record to China

Haptoncus picinus Grouvelle, 1906: 73.

Epuraea (*Haptoncus*) *picinus* Grouvelle, 1906: 73; Gillogly, 1982: 288.

Male. Length 2.2 mm; breadth 1.0 mm; height 0.4 mm.

Body oblong, strongly flattened; dark yellowish-brown; eyes black; dorsum with distinct punctures and sparse pubescence, surface strongly reticulated. Head with punctures as large as the diameter of eye facets and interspaces among them slightly broader than the diameter of puncture; dorsum with punctures as large as the punctures of head, the distance between them broader than the diameter of puncture, pubescence inconspicuous and shorter than the distance between their insertions. Metaventrite and abdominal ventrite without punctures, pubescence short.



Figures 1–7. *Epuraea* (*Haptoncus*) *picinus* Grouvelle. 1. Habitus, dorsal view; 2. Same, ventral view; 3. Pronotum; 4. Labrum; 5. Prosternal process; 6. Tegmen, ventral view; 7. Medial lobes of aedeagus, ventral view.

Head flattened, eyes large, prominent, occupying the whole side of head, temple absent behind eye. Labrum with a medial excision dividing rounded lobes; antennal club oblong-oval, not very compact, finely closely pubescent, and composing about 1/3 of total length. Mentum subpentangular, with parallel sides. Pronotum slightly convex, with straight apex and base; anterior angles rounded, posterior angles obtuse; pronotum widest at basal third, usually somewhat narrowed to the base, more than twice as wide as long; sides slightly arcuate and margins not explanate. Scutellum triangular with vertices less than 90 degrees. Elytra flattened, sides subparallel, and longer than combined width, more than twice as long as pronotum, with truncate apices. Pygidium triangular. Prosternal process elongate and slightly curved along procoxae. Distance between hind coxae larger than between mid coxae (about 2.5 times distance between mid coxae) and as large as the width of antennal club. Fore tibiae inflated, tarsal simple.

Tegmen and penis trunk moderately sclerotized; tegmen very slender, with a bunch of hairs at apex, and with some hairs subapical.

Distribution. China (Shandong, Hebei, Shaanxi, Fujian); Madagascar.

2. ***Epuraea* (*Haptoncus*) *concolor*** **Murray, 1864**

Haptoncus concolor Murray, 1864: 402; Kirejtshuk: 1998: 80; Jelink et Audisio, 2007: 464.

Haptoncus mellitula Reitter, 1873: 40.

Haptoncus minutus Reitter 1873: 40.

Haptoncus munda Sharp, 1878: 139.

Haptoncura nitescens Grouvelle, 1897: 392.

Haptoncus perminuta Reitter, 1919: 67.

Haptoncus uenoi Nakane, 1959: 56.

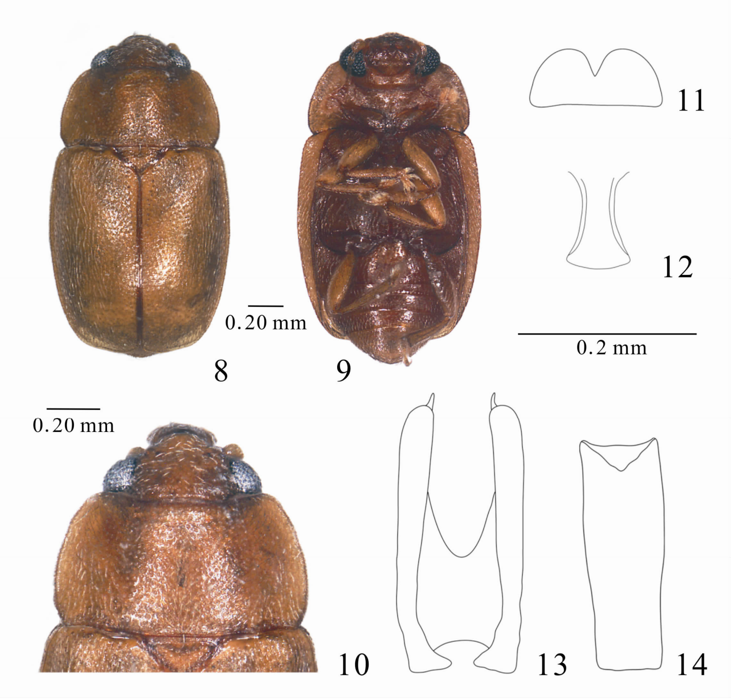
Distribution. China (Taiwan); Dorey; Japan (Tokara); Nepal; Pakistan; India; Korea.

3. ***Epuraea* (*Haptoncus*) *fallax*** **(Grouvelle, 1908)** (Figs. 8–14)

Micrurula fallax Grouvelle, 1897: 361; Jelinek et Audisio, 2007: 464.

Haptoncura opaca Grouvelle, 1897: 362.

Haptoncus opacula Grouvelle, 1906: 317.



Figures 8–14. *Epuraea* (*Haptoncus*) *fallax* (Grouvelle). 8. Habitus, dorsal view; 9. Same, ventral view; 10. Pronotum; 11. Labrum; 12. Prosternal process; 13. Tegmen, ventral view; 14. Medial lobes of aedeagus, ventral view.

Haptoncus murrayi Grouvelle, 1906: 318.

Haptoncus epuraeoides Grouvelle, 1908: 344.

Distribution. China (Sichuan, Taiwan); Russia; India; Japan; Korea.

4. ***Epuraea* (*Haptoncus*) *motschulskyi* (Reitter, 1873)** (Figs. 15–21)

Haptoncus motschulskyi Reitter, 1873: 29; Kirejtshuk, 1998: 67; Jelink et Audisio, 2007: 463.

Haptoncurina insularis Grouvelle, 1905: 319.

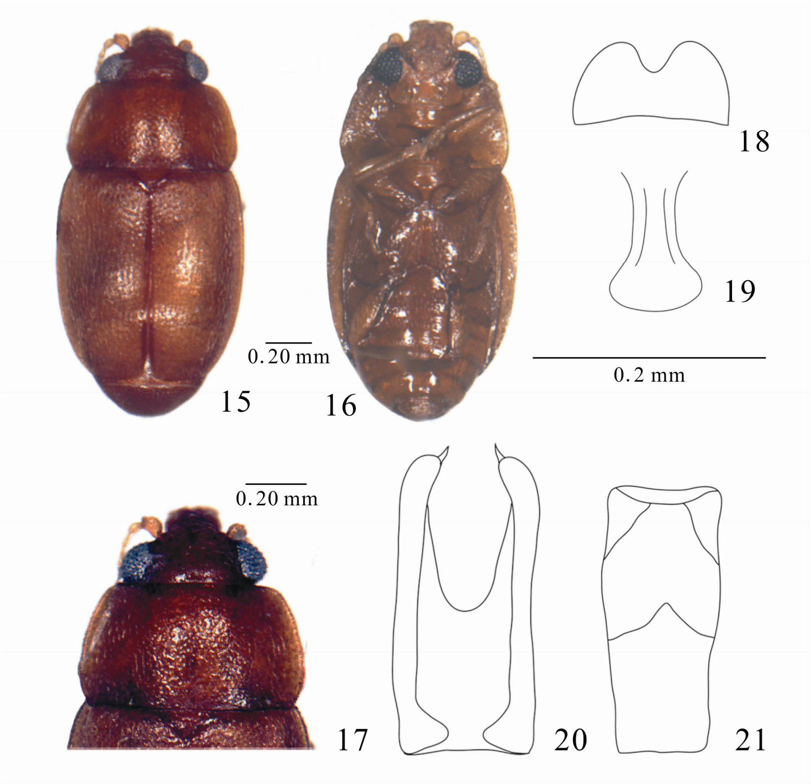
Haptoncus rhombotelus Gillogly, 1982: 286.

Epuraea angustula Motschulsky, 1863: 439.

Haptoncus rhombotela Gillogly, 1982: 286.

Haptoncus weisei Grouvelle, 1909: 132.

Distribution. China (Zhejiang, Fujian, Sichuan, Taiwan, Hunan); Japan; Bhutan; North Korea; Nepal; USA.



Figures 15–21. *Epuraea* (*Haptoncus*) *motschulskyi* (Reitter). 15. Habitus, dorsal view; 16. Same, ventral view; 17. Pronotum; 18. Labrum; 19. Prosternal process; 20. Tegmen, ventral view; 21. Medial lobes of aedeagus, ventral view.

5. ***Epuraea* (*Haptoncus*) *luteolus* (Erichson, 1843)** (Figs. 22–28)

Haptoncus luteola Erichson, 1843: 272; Kirejtshuk, 1992: 122; Jelink et Audisio, 2007: 463.

Haptoncus albertisi Reitter, 1880: 455.

Epuraea submaculata Walker, 1859: 52.

Epuraea testacea Murray, 1864: 403.

Haptoncus jloreola Sharp, 1890: 305.

Nitidula intendens Walker, 1858: 206.

Haptoncus paupercula Reitter, 1873: 179.

Haptoncus pubescens Murray, 1864: 403.

Nitidula submaculata Walker, 1859: 52.

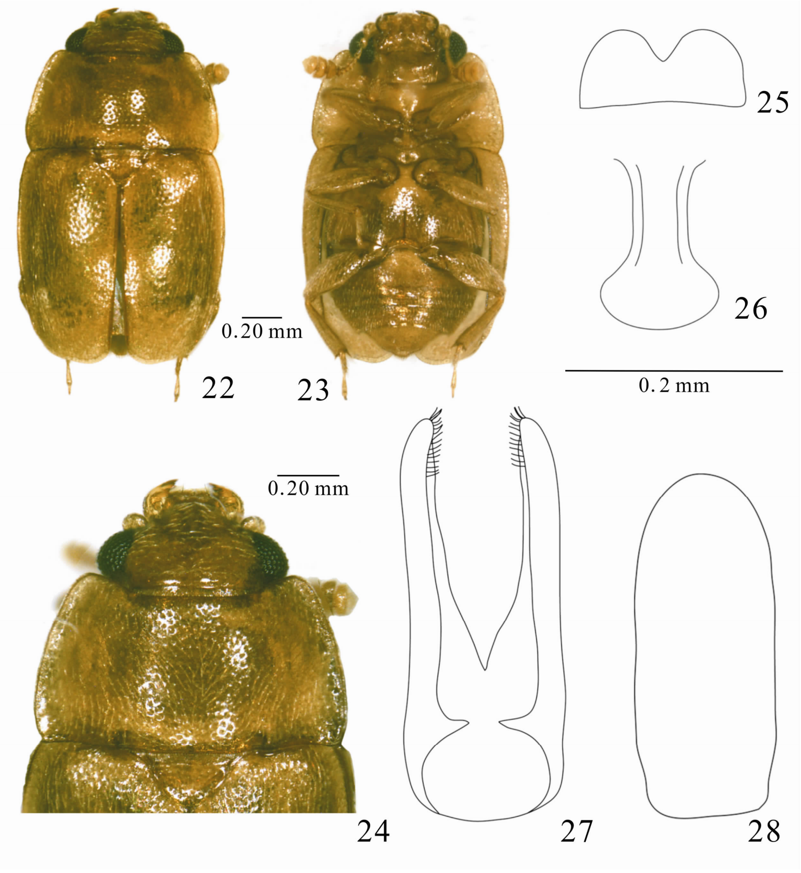
Haptoncura subquadrata Reitter, 1877: 22.

Haptoncus texana Crotch, 1874: 76.

Haptoncus testacea Murray, 1864: 403.

Haptoncus vulpecula Redtenbacher, 1868: 34.

Distribution. China (Zhejiang, Anhui, Fujian, Jiangxi, Henan, Hubei, Hunan, Guangdong, Sichuan, Taiwan); Europe; North Africa; Asia.



Figures 22–28. *Epuraea* (*Haptoncus*) *luteolus* (Erichson). 22. Habitus, dorsal view; 23. Same, ventral view; 24. Pronotum; 25. Labrum; 26. Prosternal process; 27. Tegmen, ventral view; 28. Medial lobes of aedeagus, ventral view.

6. ***Epuraea* (*Haptoncus*) *ocularis* (Fairmaire, 1849)** (Figs. 29–35)

Haptoncus ocularis Fairmaire, 1849: 363; Kirejtshuk, 1998: 102; Jelink et Audisio, 2007: 463.

Haptoncus barbulus Gillogly, 1962: 172.

Haptoncus bifasciata Kraatz, 1895: 148.

Haptoncus bisignata Boheman, 1851: 565.

Haptoncus bohemani Plavilshchikov, 1924: 232.

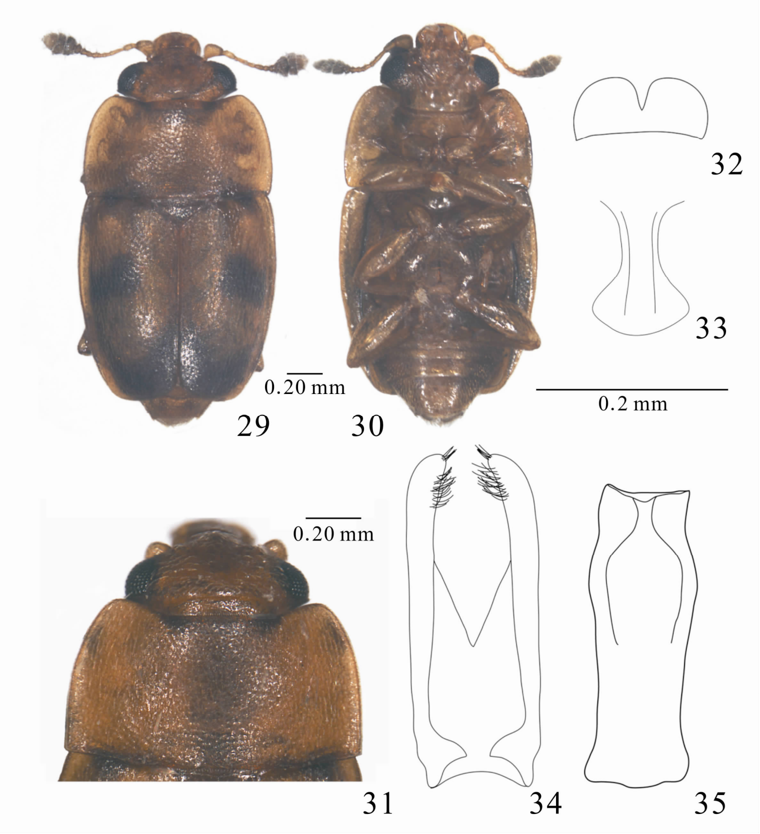
Haptoncus decorata Reitter, 1873: 41.

Nitidula significans Walker, 1858: 206.

Haptoncus tetragona Murray, 1864: 401.

Haptoncus thiemei Reitter, 1873: 41.

Distribution. China (Shaanxi, Taiwan); Austria; Japan; Korea; France; Germany; Italy; Portugal; Slovenia; Spain; Switerhand.



Figures 29–35. *Epuraea* (*Haptoncus*) *ocularis* (Fairmaire). 29. Habitus, dorsal view; 30. Same, ventral view; 31. Pronotum; 32. Labrum; 33. Prosternal process; 34. Tegmen, ventral view; 35. Medial lobes of aedeagus, ventral view.

7. ***Epuraea* (*Haptoncus*) *paulula* Reitter, 1873**

Haptoncura paulula Reitter, 1873: 36.

Epuraea (*Haptoncus*) *paulula* Reitter, 1873; Kirejtshuk, 1998: 71.

Distribution. China (Fujian, Heilongjiang, Henan, Taiwan); Japan; North Korea.

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